IN THE HIGH COURT OF JUDICATURE AT BOMBAY

ORDINARY ORIGINAL CIVIL JURISDICTION

WRIT PETITION (PIL) NO. 647 OF 2005

Citizens For A Just Society,]
through its Vice President, K. Pullaiah,]
F-9/2-2, Sector-7, Sanpada,]
Navi Mumbai 400 705] ....Petitioners

VERSUS

1. Union of India,]
   through its Secretary,]
   242, Aykar Bhavan, M.K. Road,]
   Mumbai 400 020]

2. Atomic Energy Commission,]
   through its Chairman,]
   "Anushakti Bhavan",]
   Chhatrapathi Shivaji Marg,]
   Near Gateway of India,]
   Mumbai 400 039]

3. The Department of Atomic Energy,]
   through its Secretary,]
   "Anushakti Bhavan",]
   Chhatrapathi Shivaji Marg,]
   Near Gateway of India,]
   Mumbai 400 039]
4. Bhabha Atomic Research Centre]
   through tis Director, Trombay,]
   Mumbai 400 085]

5. Atomic Energy Regulatory Board]
through its Chairman,]
4th Floor, "Vikram Sarabhai Bhavan",]
Anushakti Nagar Trombay,]
Mumbai 400 085] …Respondents.

Dr. B.K. Subbarao with Mr. John A. Fernandes
for the Petitioners

Mr. R.A. Dada, Senior Counsel, Mr. Anurag H. Gokhale and
Mr. Rajiv Chavan for Respondent Nos. 1 to 4

Mr. Sureshkumar for Respondent No. 5.

CORAM: DALVEER BHANDARI, C.J., &
S.A. BOBDE, J.

DATE OF RESERVING
THE JUDGMENT: 6TH APRIL, 2005

DATE OF
PRONOUNCING: 28th APRIL, 2005

JUDGMENT (Per Dalveer Bhandari, C.J.):-

1. This public interest petition has been preferred by Citizens For A Just Society, a social organisation founded by Dr. Usha Mehta, a Gandhian.

2. The issue involved in this petition is regarding the apprehension expressed arising from the post-Tsunami concern. According to the petitioners, on December 26, 2004, Tsunami devastated the east and west coasts of southern India and the Andaman and Nicobar Islands. The public concern is on account of the experts once again reminding publicly on the likely dangers from the geological fault-line running at the middle of Thane Creek which separates Mumbai from New Mumbai cities.

3. A further public concern is from the fact that a huge nuclear establishment is located on the west bank of Thane Creek with known geological fault line and the land mass of thickly populated Mumbai being actually of seven islands joined from reclamation.

4. The petitioners mention that on the west bank of Thane Creek is located Bhabha Atomic Research Centre ('BARC', for short), which is a premier multi-disciplinary Nuclear

Research Centre of India having excellent infrastructure for advanced research and development with expertise covering the entire spectrum of Nuclear Science and Engineering and related areas. According to the petitioners, geographically, BARC is located on the eastern suburb of Mumbai on the west bank of Thane Creek which has a geological fault line. According to the petitioners, there are three major fault-lines around Mumbai. They lie under the Thane, Panvel and Dharamtar Creeks. Mumbai falls in Seismic Risk Zone III. It can experience earthquakes measuring up to 6.5 on the Richter Scale. There are some more minor fault-lines near the eastern suburbs, which make them more vulnerable than the western suburbs. Many fault-lines lie under the Vihar, Powai and Tulsi Lakes. Some lie under Malad and Manori Creeks also. The zone to the east of the Thane Creek in a rectangular area covering Panvel, Karjat, Ambernath, Kalyan and Belapur-Mumbra is much more vulnerable than the Mumbai Island. The island city, however, needs more attention due to a two-fold problem: reclaimed land and

high rise buildings. Should an earthquake of magnitude 6 or more strike Mumbai, the stability of high rise buildings and even multi-storeyed buildings may emerge as a very serious concern.

5. The petitioners also mentioned that the radioactive nuclear waste leaks at BARC location and discharges into the Thane Creek. It is submitted that the public is in total darkness as to the safety aspects of all nuclear establishments, including BARC.

6. It may be pertinent to mention that two Writ Petitions, Nos. 1785 and 1792 of 1996, were filed before this Court by People's Union for Civil Liberties & its Hon. General Secretary and Bombay Sarvodaya Mandal and Dr. Usha Mehta, respectively, with the main prayer to make public the Report of the Atomic Energy Regulatory Board. Dr. R. Chidambaram himself filed an affidavit in October, 1996 before the High Court claiming privilege on the report as classified and

pointed out that making the said report public would cause irreparable harm to the interest of the State and would be prejudicial to the national security. A Division Bench of this Court, by a comprehensive order, dismissed the Writ Petitions on 30th January, 1997. Special Leave Petition Nos. 3964 and 3968 of 1983 were filed. Both these Special Leave Petitions, which were converted into Civil Appeal Nos. 4294 and 4295 of 1998, were heard and disposed of by the Supreme Court on 6th January, 2004. The apex Court was satisfied that the order issued by the Central Government under Section 18 of the Atomic Energy Act, 1962 and its claim of privilege do not suffer from any legal infirmity warranting interference with the High Court judgment by the Supreme Court. Accordingly, the appeals were dismissed by the apex Court on 6th January, 2004.

7. In the affidavit, the role of various organisations, such as, the Atomic Energy Commission, Atomic Energy Regulatory Board, Department of Atomic Energy, Bhabha Atomic

Research Centre and BARC Safety Council is mentioned. The respondents have made an endeavour to demonstrate that the various organisations are actively concerned with various issues of safety raised by the petitioners in this petition; and the country's top-most people are involved in the whole process and take necessary steps regarding safety and other issues.

8. It is mentioned that the Atomic Energy Commission (for short, 'AEC') was set up in 1948 under Section 13 (delegation of powers) of the Act to take such steps as may be necessary from time to time to protect the interests of the country in connection with atomic energy by the exercise of the powers conferred on the Government of India by the provisions of the

Act.

9. Similarly, the Atomic Energy Regulatory Board was constituted in the year 1983 to ensure that the use of ionising

radiation and nuclear energy in India does not cause undue risk to health of the employees, members of the public and the environment.

10. In the reply-affidavit, it is also mentioned that the Atomic Energy Regulatory Board is supported by a Safety Review Committee for Operating Plants, Safety Review Committee for Applications of Radiation and Advisory Committees for Project Safety Review. All these bodies are supposed to look after the safety of human beings and protection of environment.

11. It is also mentioned that the administrative and regulatory mechanisms, which are in place, ensure multi-tier review by the experts available nation-wide, who are members of the various committees of Atomic Energy Regulatory Board. They come from reputed academic institutions and governmental agencies.

12.It is also mentioned that the programmes of the Department of Atomic Energy, which are multi-disciplinary in nature, encompass the use of atomic energy for power generation, development of radiation technology and applications of atomic energy in the areas of agriculture, medicine, industry and research. The Department of Atomic Energy comprises Research and Development Centres, Industrial Units, Public Sector Undertakings and fully Aided Autonomous Institutions, along with service organisations. These organisations are engaged in research, technology development and commercial operations in the areas of nuclear power, associated technologies, radiation technologies and their applications and basic research. They also enrich the University system through beneficial interaction with the system.

13.Similarly, BARC is the nation's premier research centre and is engaged in advanced research and development activities in nuclear science, technology and allied fields of

contemporary interest and national significance. BARC's expertise covers the entire spectrum of science and technology ranging from particle physics, nuclear engineering, isotope technology, radiation medicine, nuclear agriculture, computers, robotics to information technology.

14. In reply-affidavit, it is mentioned that the BARC has made significant contributions in power generation, research reactor utilisation, human health and agriculture, including food preservation, enhanced industrial application and sludge hygienization, besides making good progress in advanced research in various frontline fields.

15. In reply, it is also incorporated that BARC also provides the required support for the maintenance of national security. While keeping a constant vigil in the progress of various strategically important programmes, BARC endeavours to transfer the benefits of its research and development – especially the benefit of nuclear energy – to the society

through technology transfers and collaborative development schemes with various other institutions / organisations.

16. In reply, it is argued that the BARC Safety Council carries out regulatory functions to ensure the safety of all the plants and facilities of BARC, which have been carried out by the Atomic Energy Regulatory Board. BARC also ensures compliance with the principles of good safety management as given in the relevant Safety Codes, Guides, Standards, etc., developed by the Atomic Energy Regulatory Board and the acceptable limits of radiation exposure to members of the public prescribed by the Board.

17. In reply to the averments in the petition, it is mentioned that though the petitioners have claimed that their petition is based on post-Tsunami public concern, yet, they have deliberately avoided making any statement on the impact of the recent Tsunami on the nuclear installations at Kalpakkam, Tamil Nadu. It is submitted that the Tsunami, which hit the

Tamil Nadu coast on 26th December, 2004, had no effect on the nuclear facilities at Kalpakkam. Though flooding occurred in the pump house at the Madras Atomic Power Station due to Tsunami waves, yet, the reactor was brought to a safe shut-down state automatically. The built-in safety features and procedures worked and, therefore, the reactor was brought back to normal state of operation after a few days. There was no damage to the installation and there was no release of radioactivity to the environment due to Tsunami.

18. It is also mentioned that even if a Tsunami were to hit the west coast, it would have no effect on the BARC installations for the following reasons:-

> "(i) Trombay, situated on the West bank of Thane Creek, is away from the main Arabian Sea and thus, will not be affected by Tsunami caused by earthquakes in the Arabian Sea.

(ii) The facilities in Trombay are situated at about 500 metres from the shoreline. Besides, the extensive mangroves on the Trombay coast will serve as very effective natural barriers to attenuate the waves and will protect the installations from Tsunami waves caused by earthquakes in the Arabian Sea.

(iii) Further, if there is flooding at site, the engineered safety features of the BARC facilities at Trombay will ensure that no significant amount of radioactivity will be released into the environment as a result."

19. It is further mentioned that BARC has been treated as a "strategic application centre" rather than as a "weapon making establishment" as described by the petitioners. It is asserted that BARC has no explosive material within the

establishment, if that is the misleading impression that is sought to be created by the petitioners.

20. The petitioners' allegation that officials of BARC were unable to attend to leakages and the spread of contamination underground, in and around BARC is incorrect and made maliciously and, hence, denied.

21. In the reply affidavit it is stated that radioactive liquid waste is stored in high integrity tanks with double containments and also provision for detecting even minor leaks. The radioactive liquid waste storage tanks are under constant surveillance and no incident of loss of integrity of the tanks or leakage of liquid waste from the tanks has ever been observed. It is also stated that elaborate and systematic environmental monitoring programme is in place to identify even minor leaks.

22. The petitioner's claim that radioactivity persists in the soil and spread through the food chain is also denied. The petitioners' statement that the Trombay coast is heavily contaminated is also denied. The wild grass grown in the plant premises is not auctioned by BARC, as alleged. According to respondent Nos.1 to 4, any items going out of BARC premises are thoroughly monitored and it is ensured that they are free of radioactive contamination. The allegation of the petitioners that radioactive contamination is spreading in the food chain is, according to respondent Nos.1 to 4, without any foundation whatsoever.

23. The allegation of the petitioners that the bed of the Thane Creek has become highly radioactive because of nuclear effluents is denied. The further allegation that the radioactive contamination in the Thane Creek spells danger to the whole of Mumbai is, therefore, without any substance whatsoever. In the reply-affidavit, respondent Nos.1 to 4 have annexed as Exhibit 5 a map showing the location where the

periodic environmental monitoring is conducted in the creek and other monitoring points in and around Mumbai.

24. It is also mentioned that BARC Safety Council, the legally constituted agency through a Presidential Order dated 20th June, 2000, carries out the regulatory and safety functions in respect of BARC facilities delegated to it by the Central Government, vide the aforesaid Presidential Order passed under Section 27 of the Atomic Energy Act, 1962. A comprehensive and effective environmental surveillance programme is in place for BARC facilities. The Safety Council ensures that the discharges into the environment never exceed the stipulated limits. It is submitted that the activities in BARC, being strategic in nature, detailed data on the effluent discharges cannot be made public.

25. In the reply, it is also mentioned that so far as the leakage incident, which occurred some time during 1995 in the Waste Immobilization Plant at Tarapur, which is under the control

of BARC is concerned, only a small amount of radioactivity got released into the soil. The same had been identified during the periodic survey and remedial measures were initiated promptly. The contaminated soil was disposed of as active waste. However, the said incident had no impact on the safety of the public or the environment and it had no direct bearing on the BARC installations at Trombay.

26. It is also incorporated in the reply-affidavit that the discharge limits for effluents from the nuclear installations of the Department of Atomic Energy and individual radiation exposure limits as prescribed by respondent No.5 – Atomic Energy Regulatory Board (AERB) – are faithfully followed. The said limits are either in conformity with the limits prescribed by international agencies, such as, International Atomic Energy Agency or more stringent than the standards prescribed by them. According to respondent Nos.1 to 4, the statement of the petitioners that the United Nations Scientific

Committee on Effects of Atomic Radiation commented on the releases from Indian reactors is unfounded.

27. In the affidavit-in-reply, it is also mentioned that the Safety Council enforces the safety codes and standards of AERB in letter and spirit.

28. The respondents have submitted that radiation exposures to workers and members of the public are well within the prescribed limits and the statements on the incidence of health effects such as cancer, still births, etc., at such low levels of exposures are misplaced, unscientific and without any basis and are, therefore, denied.

29. It is also submitted that liquid effluents from BARC facilities to be discharged are monitored prior to discharge and ensured that the activity concentration is within the regulatory limits. The releases into the bay are within the limits prescribed by AERB. The allegation that the fish from

the sea is no longer safe for human consumption has no scientific basis.

30. It is clearly and categorically stated in the reply that there is no cause for concern on the safety of the installations because of the Tsunami effect and there is absolutely no ground for demanding –

(i) the shifting of the strategic application activities out of Trombay;

(ii) the stopping of the fuel reprocessing activity; and

(iii) having an independent agency monitoring the Thane creek.

It is also mentioned that the effect of a possible Tsunami has been extensively studied and it is concluded that the nuclear installations at Trombay will remain safe in the event of a Tsunami occurrence for the following reasons :-

(i) the Thane creek is away from the main Arabian Sea;

(ii) coastline of Trombay is protected by thick mangroves;

(iii) Trombay facilities are 500 metres away from the shoreline;

(iv) Engineered safety features are in place to ensure that no significant amount of radioactivity is released into the environment even if the site gets flooded.

The respondents have asserted that there is no need to shift the strategic applications and reprocessing facilities out of BARC, Trombay.

31. It is also submitted in the reply that the existence of geological fault line under the Thane, Panvel and Dharamtar Creeks and Mumbai falling in Seismic Risk Zone III, including potential for earthquake measuring up to 6.5 on the Richter Scale, have been well considered and taken care of while

designing the nuclear facilities at BARC, Trombay, and there is absolutely no ground for shifting the said facilities out of Trombay on the basis of earthquake potential of the region.

32. It is also categorically mentioned that the operation of the BARC facilities in the past 40 years indicates that the same has not had any radiological impact on the marine life and the environment. The petitioners' contention that eating the fish from the area can lead to thyroid diseases, cancer, leukemia, miscarriages, birth defects, mentally retarded children, etc., is scientifically unfounded and misleading. According to the respondents, it is, perhaps, intended to create an unjustified apprehension in the minds of the people.

33. Respondent No.5, Atomic Energy Regulatory Board, has, through its Secretary, separately filed an affidavit-in-reply. It is stated by respondent No.5 that use of ionizing radiation and nuclear energy in India does not cause undue risk to

health of the employees, members of the public and the environment. It is also mentioned that the fuel failure of Dhruva Reactor of BARC did take place, but this is not a matter of safety concern, as such failures can occur in any operating reactor. "Fuel failure" means that the metal cladding over uranium fuel develops small defect while in service which results in small amount of activity coming out from the fuel into the coolant flowing over the metal cladding. This small amount of activity released to the coolant remains contained inside the coolant system boundary and is not released even to the Reactor Building, let alone the environment outside. In the reply, it is also denied that respondent No.5 had stopped bringing out Annual Reports and that the public was in total darkness as to the safety aspects of all nuclear establishments, including BARC. Respondent No.5 has not stopped bringing out its Annual Reports and such reports are being issued regularly. In addition, respondent No.5 also keeps the public informed on various matters of interest through press releases,

publication of newsletters, press conferences, interviews to the media etc. A website of respondent No.5 is also maintained and regularly updated and is fully accessible to the public. Copies of the annual reports of respondent No.5 for the period from 1992 to 2003 are also available. It is also mentioned that in an earlier petition, being Writ Petition No.1785 of 1996, filed before this Court, a classified document entitled “Safety Issues in DAE Installations” was compiled by respondent No.5 in November, 1995, which was sought to be made public. The then Chairman of the Atomic Energy Commission claimed privilege on the said document and submitted to the High Court that if the said document is made public, it would cause irreparable injury to the interest of the State and would be prejudicial to the national security. The said writ petition along with a connected petition was rejected by a common order dated 30th January, 1997. Against the said order, the petitioners therein approached the Apex Court, but were unsuccessful.

34.It may be pertinent to mention that in the previous Public Interest Writ Petition No.1785 of 1996 (with Writ Petition No. 1792 of 1996) filed before this Court, Dr. R. Chidambaram, the then Chairman of the AEC, claimed privilege on the classified document taking refuge under the Official Secrets Act, 1923 and the Atomic Energy Act, 1962. A classified document entitled “Safety Issues in DAE Installations” was compiled by AERB. One of the prayers of the petitioners in those petitions was to make public this classified document. Dr. Chidambaram claimed privilege on the said document and submitted to the Court that if the document were required to be made public, then it would cause irreparable injury to the interest of the State and would be prejudicial to national security. However, the document was offered to the Court for perusal in a sealed cover. The Court did not find it necessary to open the sealed cover and see the document. When the matter was carried in appeal, the sealed cover was placed before the Supreme

Court and even the Apex Court did not deem it appropriate to open the sealed cover.

35. The petitioners in the rejoinder have reiterated the averments made in the petition in greater details. According to the petitioners, self-regulatory control over strategic programme adopted by BARC is not in conformity with international practices. The petitioners' declaring BARC as strategic applications centre in the year 2000 amounts to ignoring and neglecting the safety and welfare of the people and it also amounts to ignoring completely the practice of other nuclear nations locating such facilities in remote and less populated areas, whereas it is located in the densely populated area in our country. It is also mentioned in the rejoinder that if the nuclear regulation is left to the in-house management at BARC, it would result in public safety being put into jeopardy.

36. It is also mentioned that in nuclear nations of the world such as USA and other countries, even the defence nuclear establishments are regulated by independent body and not by an in-house body. In USA, the defence nuclear establishments are regulated by an independent body called "Defense Nuclear Facilities Safety Board". The rejoinder also makes a mention of a report released by the Alliance for Nuclear Accountability, a national network of organizations working to address issues of nuclear weapons production and waste cleanup. In the said report, it is stated that "it is time to obey all environmental laws, clean up its mess and end plans to generate even more pollution by building new weapon plants". It is also mentioned in the report that "despite decades of promises to clean up the Cold War mess, it now appears that DOE (Department of Energy) does not intend to adequately protect communities near weapons sites from the threat of nuclear poison."

37. In the rejoinder, the petitioners have emphasized the need for safety and security measures at BARC and have given illustrations of other countries. The petitioners have reiterated in the rejoinder that on Geological Fault Line, BARC is sitting in Seismic Zone II having potential for earthquake of magnitude of 6 on the Richter Scale and, furthermore, right in the neighbourhood of BARC, the area of Alibag and other locations are known to be in the Seismic Zone IV where the Richter Scale could go up to 9 or more. According to the petitioners, Mumbai, being a conglomeration of seven islands, which also have geological fault lines in and around, the possibility of severe earthquakes and Tsunami on account of the geological conditions in the Arabian Sea and along the West Coast of India, there is every necessity in public interest to shift the strategic application activity out of Trombay, stopping of fuel reprocessing activity and also having an independent agency monitoring with Thane creek.

38. In the rejoinder, the petitioners have relied on some newspaper reports and an article by Dr. Buddhi Kota Subbarao, entitled “Nuclear Tests and Miscalculations”. In the said article, it is mentioned that “if the national interests are of paramount importance, is it in the national interest to allow our nuclear establishment to function as a private estate using public funds?” In the said article, it is also mentioned as follows :-

> “Radioactive contamination is very rapidly becoming a global problem. How big the problem already is, can be seen from the information gathered and reported by the Chugoku Newspaper of Japan which sent a team of its reporters from its base in Hiroshima to fifteen countries in all including the Soviet Union, Brazil, the United States, French Polynesia, India, Namibia and South Korea. Much of the material they unearthed had

> never been reported before or reported only in a very superficial manner."

In the concluding portion of the article, the author has stated as follows:-

> "Such are the radiation problems being faced in every country which attempted to harness nuclear technology, either for energy or for nuclear weapons. Wise people learn from others' problems and mistakes. No matter how secretive we are regarding our nuclear establishments and nuclear power plants, the damage that is occurring to the health of the people and environment is bound to be very much like it has been in other parts of the world."

39. The respondents have in their reply-affidavit denied the petitioners' above contentions in detail and have stated that the petitioners' apprehensions are not well-founded.

40. We have carefully considered the rival contentions articulated in the pleadings and the comprehensive reply-affidavits filed by the respondents in which all the apprehensions about radioactive contamination and safety measures have been dispelled. As already stated above, Writ Petition Nos.1785 and 1792 of 1996 filed earlier in this Court were dismissed by this Court after considering the rival contentions. The Apex Court, after considering the contentions of the parties in detail, dismissed the appeals preferred by the petitioners therein. Undoubtedly, this petition raises issues of public health, environment and safety. This petition also raises questions which are extremely important from the point of view of national security. But at the same time, the matter is extremely sensitive and it is difficult to comprehend what could be the repercussion and

ramification of the disclosure of such vital information. Security of the nation has to be of paramount importance. There cannot be any compromise on that.

41. In Writ Petition Nos.1785 and 1792 of 1996, though the respondents claimed privilege on the classified document, but requested the Court to open the sealed cover if it deemed it necessary and important. Both this Court and the apex Court did not deem it imperative to open the sealed cover. In our considered opinion, that was, indeed, the correct approach. In these proceedings also, in the larger public interest, we would not like to compel the respondents to disclose the document, which is classified as secret. In the reply affidavit it is made abundantly clear that all safety measures have been taken from the point of view of the security of the nation, security of inhabitants of Mumbai, people residing in the vicinity and the environment. In view of such statements on affidavit, it would not be appropriate to probe the matter any further.

42. We hope and trust that the material which has been made available by the petitioners would be looked into by the respondents very carefully and we have no doubt that the respondents would take all necessary steps which are imperative to be taken in connection with the safety of the people, interests of the nation and environment. The litigation may provide a further opportunity of introspection for both the Atomic Energy Commission and Bhabha Atomic Research Centre to once again have the general overview of its safety measures and impact on environment. We advise the petitioners and such other enlightened people to approach these organisations directly instead of filing petitions.

43. In our considered view, no further directions are necessary. This petition is accordingly disposed of. In the facts and circumstances of the case, we direct the parties to bear their own costs.

CHIEF JUSTICE

S.A. BOBDE, J.